

Title (en)
COOLANT FLOW CONTROL

Publication
EP 0362241 A4 19910911 (EN)

Application
EP 88904437 A 19880524

Priority
• AU 8800156 W 19880524
• AU PI220687 A 19870528

Abstract (en)
[origin: WO8809230A1] A method and apparatus for controlling the temperature of a machine tool (e.g. mill rolls (7, 8)). A coolant or lubricant is fed from a header supply (22) to the primary inlet (21) of a fluidic device (20) such as a vortex valve. The outlet (23) of the fluidic device (20) is directed to or at the machine tool (7, 8). A second flow (36) of coolant or lubricant from reservoir (25) is fed to the control inlet (30) of the fluidic device (20) the second flow (36) being controlled via a feedback signal (27) and valve (26) to vary the second flow (36) in response to workpiece shape or temperature so that the total outflow from the outlet (23) of coolant or lubricant can be varied. The second flow (36) may be at a temperature which differs from that of the first flow so that as the flow rate from outlet (23) to the workpiece rises the temperature of the coolant or lubricant falls.

IPC 1-7
B21B 27/10; **B23Q 11/10**

IPC 8 full level
B21B 27/10 (2006.01); **B21B 37/32** (2006.01); **B21B 45/02** (2006.01); **B23Q 11/10** (2006.01); **F16N 7/40** (2006.01)

CPC (source: EP)
B21B 27/10 (2013.01); **B21B 37/32** (2013.01); **B21B 45/0233** (2013.01); **B21B 45/0251** (2013.01); **F16N 7/40** (2013.01); **B21B 45/029** (2013.01); **Y02P 70/10** (2015.11)

Citation (search report)
• [X] JP S5594718 A 19800718 - ISHIKAWAJIMA HARIMA HEAVY IND
• [Y] SU 719723 A1 19800305 - DO NII CHERNOJ METALLURGII [SU]
• [X] JP S6171113 A 19860412 - KOBE STEEL LTD
• [X] DE 2038873 B1 19711202 - LUBRICOR KUEHLSCHMIERMITTEL GM
• [A] GB 2015401 A 19790912 - VAASSEN ALUMINIUM
• [A] JP S5910404 A 19840119 - KAWASAKI STEEL CO
• [A] JP S6221413 A 19870129 - SUMITOMO METAL IND
• See references of WO 8809230A1

Cited by
CN102069097A; US9884330B2; US10773271B2; US10189031B2; US10730065B2; US10994297B2

Designated contracting state (EPC)
CH DE FR GB IT LI NL SE

DOCDB simple family (publication)
WO 8809230 A1 19881201; DE 3850395 D1 19940728; DE 3850395 T2 19941027; EP 0362241 A1 19900411; EP 0362241 A4 19910911; EP 0362241 B1 19940622; JP H02503531 A 19901025

DOCDB simple family (application)
AU 8800156 W 19880524; DE 3850395 T 19880524; EP 88904437 A 19880524; JP 50426288 A 19880524